APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE SPECIFICATION

The changes made to the specification and claims are shown below. Text that is being added is underlined, except for the titles of the examples which have not been changed but are underlined nonetheless. No text is being deleted from the specification.

Page 7, paragraph 2:

Referring to Fig. 1, an apparatus 100 for automatically measuring the soil pH according to the present invention is shown. Apparatus 100 includes a probe assembly 110 affixed to a chassis 120. Chassis 120 has a forward side 121 and a rear side 122, corresponding to the direction in which apparatus 100 moves when collecting data. Chassis 120 is supported by one or more wheels 120, which are adjustably mounted thereto, so as to allow chassis 120 to be raised or lowered relative to the surface of the ground 131. A tow hitch 140 is affixed on the forward side 121 of chassis 120, so that the apparatus can be towed by a standard tractor 132 or other appropriate vehicle. A shank 150 is affixed to chassis 120 directly [in] forward of probe assembly 110, and with the bottom edge of shank 150 positioned lower than the bottom of probe assembly 110 when the apparatus is not collecting data. A removable plate 180 is positioned parallet to the direction of travel, adjacent to the trailing edge of shank 150, and to the side of probe assembly 110. A top plan view of the shank 150/removeable plate 180 arrangement is illustrated in FIG. 6.

Page 8, paragraph 1:

A water tank 160 is connected by water hoses [165] (shown as 165 in FIG. 2) to a water pump 167, which is in turn connected to nozzles (shown as 250 in FIG. 2) in probe assembly 110. In one embodiment, water pump 167 is a standard 12V water pump (such water pumps being commonly known in the art). A compressed air tank 170 is connected to an air cylinder (shown as 230 in FIG. 2) [though] through air hoses 175. Preferably, water hoses 165 and air hoses 175 are affixed to chassis 120 at a number of places along chassis 120.

Page 8, paragraph 3:

A computer [180] 199 is affixed to chassis 120, and is telemetrically connected to water pump 167, air cylinder 230, location sensor 190, and a probe (shown as 240 in FIG. 2), and is programmed automatically to record pH measurements made by probe 240[,] and location measurements made by location sensor 190, to correlate pH measurements with the location at which they are made, and to control water pump 190 and air cylinder 230, as further described below. In an alternative embodiment, water pump 190 and air cylinder 230 are controlled by a separate computer.

Page 12, last paragraph:

While sampling platform 210 is extended, water is pumped by water pump 167 from tank 160 through hoses 165, and projected through nozzles 250 onto probe [140] 240, so as to remove remnants from the previous measurement which might otherwise contaminate the new sample. Preferably, water is projected under pressure of at least

about 100kPa. By projecting water onto probe [140] 240 while sampling platform 210 is extended, samples are collected simultaneously to clean probe [140] 240, minimizing measurement cycle time. The operation of water pump 167 and air cylinder 230 is synchronized by computer [180] 199, which controls the operations of both.

Page 13, first full paragraph:

Computer [180] 199 also records the position of apparatus 100 as measured by position measuring devise 190 while sampling platform 210 is in the extended position. The pH measurement of this sample is recorded approximately 6 seconds later, just before the measurement cycle is competed, and is associated in the data storage device with the position of apparatus 100 when the sample was collected. In this way, the pH data is correctly identified with the position in the field from which the soil sample was taken, and not with the position of the apparatus 100 when the measurement is made, which is later in time, when it will have moved some distance from the sample collection location.